

Valuation Multiples in U.S. HVAC Service Businesses: A Synthesis of Tiered Pricing, Recurring-Revenue Premia, and Buyer-Archetype Differentiation in the Lower Middle Market

Christoph Totter

CT Strategic Partners LLC

ctacquisitions.com

chris@ctacquisitions.com

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acquisition pricing. No quantitative claim in the paper rests on the author's proprietary data; pipeline observations from the firm's buy-side advisory engagements between 2023 and 2026 are used only to frame testable hypotheses for future research and are explicitly identified where used. The author's prior practitioner treatment of the same subject matter (Totter, 2026d) is cited as a companion reference.

ABSTRACT

This paper provides a structured synthesis of valuation-multiple evidence for U.S. heating, ventilation, and air conditioning (HVAC) service businesses in the lower middle market. Drawing on publicly-disclosed transaction data, SEC 10-K filings of publicly-traded HVAC consolidators (Comfort Systems USA, EMCOR Group, Watsco), practitioner valuation reports, and the academic literature on private-company acquisition pricing, the synthesis documents five empirical patterns. First, valuation multiples exhibit a strong size-tier gradient: businesses with under one million dollars in Seller's Discretionary Earnings (SDE) typically transact at 2.0 to 3.0 times SDE through SBA-financed individual-buyer channels, while businesses with twenty-five million dollars or more of trailing EBITDA have transacted in 2024–2026 at platform-level multiples in the 13 to 20 times range, indicated by press-derived references for transactions including the November 2024 Sila Services and February 2026 Champions Group transactions. The transition from SDE-based to EBITDA-based valuation at approximately one million dollars in annual owner economic benefit is identified as a discontinuous threshold rather than a smooth gradient. Second, recurring-revenue intensity is associated with material multiple expansion: practitioner reporting consistently identifies an additional 0.5 to 1.0 times EBITDA premium for HVAC businesses with thirty percent or more revenue from maintenance-agreement membership programmes, with a structural floor at the 2.0 to 3.0 times annual-recurring-revenue valuation level for plan portfolios considered standalone. Third, buyer-archetype differentiates achievable price: PE platform sponsors, PE add-on capital, search funders, family offices, and strategic acquirers exhibit distinguishable multiple ranges and cash-versus-rollover-versus-earnout deal-structure preferences. Fourth, observable value-driver characteristics (geographic concentration in the Sun Belt, commercial versus residential revenue mix, management depth, owner-dependency, fleet age, license-holder structure, customer concentration) compress or expand multiples within the size-tier band by margins documented in practitioner reporting. Fifth, the academic literature on private-company acquisition discounts (Officer, 2007) provides theoretical grounding for the directional pattern that LMM private HVAC transaction multiples remain below the multiples of publicly-traded mechanical-services consolidators; the magnitude of the gap, however, cannot be cleanly attributed to the Officer mechanism alone, because the available listed comparables (Comfort Systems USA, EMCOR Group, Watsco) differ from the Tier 5 private platforms by approximately one order of magnitude in EBITDA scale, by material business-mix composition, and by cycle-specific data-centre construction demand exposure. The synthesis is situated within the

academic literature on buy-and-build value creation (Hammer, Marcotty-Dehm, Schweizer, & Schwetzler, 2022; Heisig, Kick, & Schwetzler, 2022) and the empirical literature on industry consolidation. Acknowledged limitations include the absence of audited deal-level multiple data at the LMM-private-transaction level, the practitioner-aggregated source character of the size-tier and buyer-archetype pricing ranges, and the U.S.-centric scope.

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1. Introduction

The U.S. heating, ventilation, and air conditioning (HVAC) services industry, with annual revenue of approximately 158 to 159 billion U.S. dollars and approximately 118,000 establishments (IBISWorld, 2026; U.S. Bureau of Labor Statistics, 2025), is one of the largest service-trade segments in the United States and one of the most actively consolidated by private-equity (PE) capital over the past decade (Section 2). The intersection of substantial industry scale, sustained PE consolidation activity, and the heterogeneity of operator characteristics across the lower middle market produces a valuation environment in which a single “HVAC multiple” is empirically misleading. Reported multiple ranges spanning two times Seller’s Discretionary Earnings at the small-operator end of the distribution to twenty times trailing EBITDA at the platform-acquisition end of the distribution reflect a structurally tiered market in which the relevant multiple depends jointly on business size, recurring-revenue intensity, buyer-archetype, and a set of observable value-driver characteristics that compress or expand the size-tier band.

The academic literature on private-company acquisition pricing has established that unlisted targets transact at discounts of fifteen to thirty percent relative to comparable publicly-traded targets, with the discount interpreted as the price paid by private owners for the liquidity provided by the buyer (Officer, 2007). The literature has been built on cross-industry samples and has not, to the author’s knowledge, been applied with industry-specific granularity to the U.S. HVAC services segment, despite the segment’s empirical importance as one of the most actively consolidated U.S. service-trade verticals (Section 2).

The practitioner reporting on HVAC valuation, in contrast, has produced extensive size-tier, buyer-archetype, and value-driver pricing analyses (Auxo Capital Advisors, 2026; Breakwater M&A, 2026; First Page Sage, 2025; Main Street Wealth, 2026; PKF O’Connor Davies, 2025), but has not been systematically synthesised with attention to the academic literature on private-company pricing, the SEC-filed disclosures of publicly-traded consolidators (Comfort Systems USA, EMCOR Group, Watsco), or the buy-and-build value-creation framework that organises the academic understanding of PE consolidation activity (Hammer et al., 2022; Heisig et al., 2022). This paper provides that synthesis.

Three research questions organise the analysis.

1. **Size-tier gradient.** What is the empirical valuation-multiple distribution across HVAC business size tiers (sub-one-million-dollar SDE; one to three million dollar EBITDA; three to ten million dollar EBITDA; ten to twenty-five million dollar EBITDA; twenty-five-million-dollar-plus EBITDA), and how does the transition from SDE-based to EBITDA-based valuation at approximately one million dollars in annual owner economic benefit affect realised seller outcomes?

2. **Value-driver decomposition.** Within each size tier, which observable value-driver characteristics (recurring-revenue intensity, commercial-versus-residential revenue mix, geographic concentration, management depth, owner-dependency, fleet age, license-holder structure, customer concentration) account for the most material multiple expansion or compression?
3. **Buyer-archetype differentiation.** How do achievable multiples and deal-structure mixes (cash, rollover equity, seller note, earnout, escrow) differ across buyer archetypes (PE new-platform sponsor, PE add-on capital, strategic acquirer, search funder, family office, individual operator buyer) for the same underlying HVAC business?

The paper is organised as follows. Section 2 reviews the academic and practitioner literatures. Section 3 specifies data sources and scope. Section 4 presents the synthesis results across size-tier, recurring-revenue, buyer-archetype, value-driver, and public-comparable dimensions. Section 5 discusses implications. Section 6 acknowledges limitations and identifies future research. Section 7 concludes.

2. Background and Literature Review

2.1 The Academic Literature on Private-Company Acquisition Pricing

The empirical literature on private-company acquisition pricing has converged on the proposition that unlisted targets transact at multiples below those observed for comparable publicly-traded targets. Officer (2007), in a study of acquisitions of stand-alone private firms and corporate subsidiaries published in the *Journal of Financial Economics*, documents acquisition discounts of fifteen to thirty percent for unlisted targets relative to comparable publicly-traded targets. The discount is interpreted as the price paid by private owners or corporations for the liquidity provided by the buyer, with the magnitude of the discount varying systematically with the cost of debt capital and the financial condition of the seller. The Officer (2007) framework has been extended in subsequent work documenting heterogeneity in the private-company discount across deal characteristics (Bargeron, Schlingemann, Stulz, & Zutter, 2008) and the relationship between private-target acquisition returns and acquirer information advantages (Capron & Shen, 2007).

This applies directly to the U.S. HVAC case. The publicly-traded consolidators in the broader HVAC-and-mechanical-services vertical (Comfort Systems USA, EMCOR Group, Watsco), computed from FY2025 audited results and pinned to the late-May 2026 observation window, traded at trailing-twelve-month enterprise-value-to-EBITDA multiples of approximately 18 to 36 times across the three (Section 3.3; Section 4.5). Private LMM HVAC transactions in the same period have been reported at multiples in the 4 to 12 times range for businesses with one to twenty-five million dollars of EBITDA, with platform-level

transactions for the largest private platforms reaching the 13 to 20 times range as documented in the press-derived references in Section 4. The directional differential between public-comparable and private-transaction multiples is consistent with the private-company acquisition discount documented by Officer (2007), although Section 4.5 develops at greater length why this directional consistency does not support precise quantitative attribution.

2.2 Buy-and-Build Value Creation and Multiple-Arbitrage Mechanics

The empirical literature on PE-led buy-and-build strategies has established two principal value-creation channels: an “add-on sourcing effect” (the reduction of average entry multiple achieved by acquiring smaller targets at lower multiples than the platform) and a “platform expansion effect” (the combined entity achieving a higher exit multiple than would have been available to the platform alone). Hammer, Marcotty-Dehm, Schweizer, and Schwetzler (2022) document that PE sponsors pay entry premia of up to forty-seven percent when the platform company executes add-ons in the same industry within twenty-four months post-buyout, indicating that buy-and-build is an anticipated rather than opportunistic strategy. Heisig, Kick, and Schwetzler (2022), in the largest empirical sample of buy-and-build transactions assembled to date, identify the structural conditions under which add-on probability is highest and document the multiple-arbitrage spread between platform and add-on transactions.

This framework predicts and explains the observed size-tier gradient in HVAC multiples. PE platforms enter at multiples of seven to twelve times trailing EBITDA for businesses in the three to fifteen million dollar EBITDA range (Section 4.1) and execute add-on acquisitions at multiples of four to six times trailing EBITDA for sub-three-million-dollar businesses, capturing a multiple-arbitrage spread of approximately thirty to forty percent at the platform exit. The size-tier gradient documented in Section 4 is therefore not a market inefficiency but a structural feature of the multiple-arbitrage mechanics through which PE returns are generated.

2.3 Practitioner Reporting on HVAC Valuation Multiples

Practitioner-side reporting on HVAC valuation multiples has been extensive, and the principal sources agree on the broad pricing structure. The most systematic recent treatments include the Auxo Capital Advisors 2026 HVAC valuation guide (Auxo Capital Advisors, 2026), the Breakwater M&A 2026 HVAC business valuation analysis (Breakwater M&A, 2026), the First Page Sage 2025 HVAC EBITDA multiples report (First Page Sage, 2025), the PKF O’Connor Davies summer 2025 HVAC M&A update (PKF O’Connor Davies, 2025), and the Main Street Wealth 2026 HVAC EBITDA multiples by deal-size analysis (Main Street Wealth, 2026). The GF Data deal-terms reports (GF Data, 2025) provide cross-industry benchmark data on lower-middle-market private transaction multiples that anchor the HVAC-specific size-tier gradient against the broader LMM PE benchmark.

The Pepperdine Private Capital Markets Project (Pepperdine Graziadio Business School, 2025) and the IBBA Market Pulse Report (International Business Brokers Association, 2025) provide complementary cross-industry benchmark data on the sub-one-million-dollar SDE transaction segment that anchors the lowest tier of the HVAC size-tier gradient.

The author has separately published a practitioner-oriented treatment of the same subject matter (Totter, 2026d) that contains transaction-level worked examples, quality-of-earnings adjustment categories specific to HVAC diligence, and a more extensive treatment of the operational levers that produce multiple expansion. This synthesis paper is offered as an academic-format complement that engages with the academic literature on private-company pricing and the buy-and-build framework reviewed above, rather than as a replacement for the practitioner treatment.

3. Methodology

3.1 Data Sources

The synthesis draws on six categories of publicly-available source material.

Practitioner valuation reports. The five HVAC-specific practitioner reports reviewed in Section 2.3 supply the principal size-tier, buyer-archetype, and value-driver pricing ranges referenced throughout Section 4. Each is identified by name where its specific evidence is invoked.

SEC filings of publicly-traded consolidators. Comfort Systems USA (NYSE: FIX), EMCOR Group (NYSE: EME), and Watsco (NYSE: WSO) file annual 10-K reports disclosing revenue, EBITDA, segment composition, and acquisition activity. These filings supply the public-comparable anchor in Section 4.5 and the FY2025 sectoral revenue and margin data referenced throughout. The Comfort Systems USA acquisition of J&S Mechanical (February 2024, 120 million U.S. dollars total consideration on implied 12 to 15 million dollar EBITDA) is the principal observable strategic-acquirer transaction at sufficient scale and disclosure for direct multiple inference (Comfort Systems USA, 2024).

Industry market-sizing services. IBISWorld 2026 industry data on the U.S. Heating and Air-Conditioning Contractors industry (IBISWorld, 2026), U.S. Bureau of Labor Statistics employment and wage statistics (U.S. Bureau of Labor Statistics, 2025), and AHRI shipment data (Air-Conditioning, Heating, and Refrigeration Institute, 2025) supply aggregate market size, establishment count, and demand-trajectory data.

Cross-industry benchmark data services. GF Data deal-terms reports (GF Data, 2025), the IBBA Market Pulse Report (IBBA, 2025), and the Pepperdine Private Capital Markets Project (Pepperdine Graziadio Business School, 2025) provide cross-industry LMM transaction benchmarks against which the HVAC-specific gradient is anchored.

Press-derived references for platform-level transactions. Platform-level captable transactions referenced in Section 4.1 (Sila Services, Apex Service Partners, Redwood Services, Service Logic, Champions Group) are documented in primary-source press releases by the named sponsors; multiple inference from these transactions, where attempted, draws on trade-press calculations (HomePros, 2025; Mergersight, 2026) and is identified as press-derived rather than primary-source-confirmed.

Practitioner pipeline observations. Observations from the author’s firm’s buy-side advisory pipeline between 2023 and 2026 are used only to frame testable hypotheses for future research and are explicitly identified where used. No quantitative claim in this paper rests on this proprietary data.

3.2 Definitions and Scope

Three definitional choices affect the analysis.

“Seller’s Discretionary Earnings (SDE)” refers to operating cash earnings after normalisation for owner compensation, owner-incurred personal expenses, owner-leased real estate, and one-time items, computed as if the business were operated by a single owner-operator. SDE is the standard valuation basis for businesses sold to individual-operator buyers through SBA-financed channels and is the multiple basis for businesses with under approximately one million dollars in annual owner economic benefit.

“EBITDA” refers to earnings before interest, taxes, depreciation, and amortization, computed after the same normalisation adjustments applied to SDE plus a market-rate management-replacement compensation adjustment. EBITDA is the standard valuation basis for businesses with management infrastructure capable of operating the business independent of any single owner-operator and is the multiple basis for businesses sold to PE, family-office, search-funder, and strategic-acquirer buyers.

“Lower middle market” is used to denote transactions involving privately-held HVAC service businesses with enterprise values in the approximate range of ten million to five hundred million U.S. dollars, or annual EBITDA in the approximate range of one to twenty-five million U.S. dollars. The lowest tier discussed in Section 4 (sub-one-million-dollar SDE businesses) falls below this range and is discussed for completeness; the upper tier (twenty-five-million-dollar-plus EBITDA platforms) is at or above the upper bound and is discussed using the press-derived platform-transaction references identified in Section 3.1.

3.3 The SDE-to-EBITDA Threshold and the Public-Comparable Anchor

A central definitional and methodological feature of HVAC business valuation is the discontinuity at the approximately one-million-dollar annual-owner-economic-benefit threshold. Businesses below this threshold are typically sold to individual-operator buyers using SDE as the multiple basis at multiples of two to three times; businesses at or above the threshold are typically sold to institutional buyers using EBITDA as the multiple basis at

multiples of five to seven and a half times in the lower part of the range. The empirical consequence is that a business operating at nine hundred thousand dollars of SDE may transact at approximately 2.7 million dollars (three times SDE), while the same business reorganised to demonstrate one and one tenth million dollars of EBITDA may transact at approximately 5.5 million dollars (five times EBITDA), a doubling of realised value across a one-hundred-thousand-dollar change in measured owner economic benefit. The threshold is identified in the practitioner literature as a discontinuous rather than smooth gradient (Auxo Capital Advisors, 2026; Main Street Wealth, 2026).

A separate methodological anchor is provided by the public-comparable HVAC-and-mechanical-services consolidators (Comfort Systems USA, EMCOR Group, Watsco). Pinned to the late-May 2026 observation window and computed from fiscal year 2025 audited results (Comfort Systems USA, 2025; EMCOR Group, 2025; Watsco, 2025), the observable trailing-twelve-month enterprise-value-to-EBITDA multiples are approximately 35.5 times for Comfort Systems USA (FY2025 adjusted EBITDA of 1.45 billion U.S. dollars; market capitalisation approximately 60.5 billion dollars; implied enterprise value approximately 51.6 billion dollars), approximately 18.4 times for EMCOR Group (FY2025 implied EBITDA of approximately 1.75 billion dollars after deducting the disclosed 144.9 million dollar non-recurring U.K. divestiture gain; market capitalisation approximately 41.2 billion dollars), and approximately 20.5 times for Watsco (trailing-twelve-month EBITDA of approximately 736 million dollars; market capitalisation approximately 14.7 billion dollars; implied enterprise value approximately 15.1 billion dollars). The gap between these public-comparable multiples and the LMM private-transaction multiples documented in Section 4.1 (4 to 12 times for one to twenty-five million dollar EBITDA businesses) is directionally consistent with the private-company acquisition discount documented by Officer (2007), although the cross-segment composition and scale differential between these listed consolidators and LMM private HVAC operators complicates direct attribution and is discussed further in Section 4.5.

3.4 Limitations

Four limitations are material and are returned to in Section 6.

1. **Practitioner-aggregated multiple data.** The size-tier and value-driver pricing ranges referenced throughout Section 4 are aggregated from the named practitioner reports. Audited deal-level multiple data at the LMM-private-transaction level is not publicly available, and the pricing ranges should be treated as directional rather than precise.
2. **Disclosure-dependent transaction inference.** Platform-level multiple inference for the press-derived transactions in Section 4.1 (Sila Services, Champions Group, Redwood Services) draws on trade-press calculations rather than on primary-source sponsor disclosure of consideration values. The 17 to 20 times multiple range referenced for these transactions is the published press-derived estimate and is not independently confirmed.

3. **Buyer-archetype pricing-range generalisation.** The buyer-archetype pricing differentiation in Section 4.3 reflects practitioner reporting that itself aggregates across the cross-industry LMM population. HVAC-specific buyer-archetype pricing-range tabulations are not, to the author’s knowledge, published at the level of granularity needed for direct HVAC-specific testing, and the ranges should be treated as the HVAC-applicable subset of the broader cross-industry observation.
4. **U.S.-centric scope.** The synthesis is limited to U.S. operations. Concurrent HVAC consolidation activity in Canada, Europe, and Asia exhibits different pricing patterns and is not integrated here.

4. Synthesis Results

4.1 Size-Tier Valuation Gradient

Table 1 presents the size-tier valuation gradient documented across the practitioner sources.

Table 1. HVAC business valuation multiples by size tier (synthesis of practitioner reporting).

Size Tier	EBITDA or SDE Range	Typical Multiple Range	Multiple Basis
Tier 1 (Individual operator)	Under \$1M SDE	2.0 – 3.0x SDE	SDE
Tier 1 (Individual operator)	Under \$1M EBITDA	3.0 – 4.5x EBITDA	EBITDA
Tier 2 (LMM small)	\$1M – \$3M EBITDA	5.0 – 7.5x EBITDA	EBITDA
Tier 3 (LMM mid)	\$3M – \$10M EBITDA	7.0 – 10.0x EBITDA	EBITDA
Tier 4 (LMM large)	\$10M – \$25M EBITDA	9.0 – 13.0x EBITDA	EBITDA
Tier 5 (Platform)	\$25M+ EBITDA	13.0 – 20.0x EBITDA	EBITDA (press-derived for platforms)

Note. Multiple ranges are synthesised from Auxo Capital Advisors (2026), Breakwater M&A (2026), First Page Sage (2025), Main Street Wealth (2026), and PKF O’Connor Davies (2025). The Tier 5 multiple range relies on press-derived references for platform-level transactions including the November 2024 Sila Services transaction with Goldman Sachs

Alternatives (reported press-derived multiple of approximately 17 to 20 times), the May 2025 Redwood Services transaction with Altas Partners (approximately 17 times), and the February 2026 Champions Group transaction with Blackstone BXPE (approximately 18.5 times). Primary-source sponsor disclosure of consideration values is not available for these transactions, and the multiple references are not independently confirmed.

Three observations emerge. First, the gradient is **non-linear at the SDE-to-EBITDA threshold**. The transition from individual-operator buyer pool (SDE basis) to institutional buyer pool (EBITDA basis) at the approximately one million dollar annual-owner-economic-benefit level produces a discontinuous expansion of multiple from approximately 2.5 times SDE to approximately 5.5 times EBITDA. A business positioned at the upper end of Tier 1 has substantial economic incentive to invest in the management-depth, financial-reporting, and add-back-documentation discipline needed to qualify for Tier 2 valuation (Section 5.1).

Second, the gradient is **monotonic within the institutional buyer-pool segment**. Multiples expand monotonically from Tier 2 (5.0 to 7.5 times) through Tier 5 (13.0 to 20.0 times), with each tier transition producing approximately a one-to-two-times multiple expansion. The mechanism producing this monotonic expansion is the buy-and-build multiple-arbitrage spread documented by Hammer et al. (2022) and Heisig et al. (2022): PE platforms acquiring add-ons at Tier 2 to Tier 3 multiples capture the spread on exit at Tier 4 to Tier 5 multiples.

Third, the upper end of the gradient (Tier 5 platform multiples of 13 to 20 times) approaches but does not reach the public-comparable multiples of the listed consolidators (18 to 36 times for FIX, EME, and WSO as of late-May 2026 per Section 3.3). The direction of the Tier 5 to public-comparable differential is consistent with the private-company acquisition discount documented by Officer (2007); the precise magnitude attributable to the Officer mechanism alone, versus to size, business-mix, and cycle-specific effects, is addressed at greater length in Section 4.5.

4.2 The Recurring-Revenue Premium

A central feature of HVAC valuation is the multiple premium attaching to businesses with material revenue from recurring maintenance-agreement membership programmes. Practitioner reporting points to an additional 0.5 to 1.0 times EBITDA premium for businesses with thirty percent or more recurring-revenue intensity relative to comparably-sized installation-and-replacement-dependent operators (Auxo Capital Advisors, 2026; Breakwater M&A, 2026; First Page Sage, 2025). The reported range is practitioner-aggregated rather than econometrically estimated and should be treated as directional; the underlying practitioner reports do not in general disclose the deal-level data on which the ranges are based.

The order of magnitude is nonetheless defensible against a simple back-of-envelope check. A 0.5 to 1.0 multiple expansion against a Tier 2 baseline multiple of approximately 6 times EBITDA implies a 8 to 17 percent valuation uplift attributable to the recurring-revenue characteristic. This is in the same order of magnitude as the gross-profit-contribution uplift that recurring revenue plausibly produces: at a 25 to 48 percent gross margin on maintenance-plan revenue (per Profitability Partners, 2024), a 30 percent recurring-revenue share on a 10 million dollar revenue business contributes approximately 0.75 to 1.4 million dollars of recurring gross profit, which on a 2.0 to 3.0 million dollar EBITDA business represents roughly 25 to 70 percent of EBITDA visibility from a structurally durable revenue channel. The 8 to 17 percent valuation uplift implied by the practitioner-reported multiple premium sits well below the 25 to 70 percent EBITDA-visibility contribution, which fits the interpretation that buyers underwrite recurring revenue at a partial premium reflecting renewal-rate risk and the bundled installation-revenue dependency that maintenance plans typically carry. The practitioner range does not appear to be inconsistent with what the underlying cash-flow economics would support.

Two structural channels account for the premium. First, the **cash-flow predictability channel**: recurring maintenance revenue exhibits high visibility, low cyclicity, and high gross-margin contribution (typically 25 to 48 percent gross margin per plan), supporting buyer underwriting of debt capital structures and reducing the risk-adjusted required return. Second, the **replacement-attach channel**: HVAC maintenance plans produce systematic visibility into equipment condition and end-of-life timing, supporting elevated replacement-equipment attach rates among plan members (30 to 50 percent for premium performers per Profitability Partners, 2024). The combination produces both higher expected cash flow and lower variance of realised cash flow than the installation-and-replacement-dependent baseline.

A separable valuation methodology approaches the recurring-revenue premium by valuing the plan portfolio as a standalone annuity. Practitioner reporting identifies a standalone valuation range of 2.0 to 3.0 times annual recurring revenue for maintenance-plan portfolios, with the structural premium reflecting the high renewal rates, the low customer-acquisition-cost-replacement requirement, and the replacement-attach economics. The standalone valuation methodology and the EBITDA-with-recurring-revenue-uplift methodology produce different aggregate valuations and should not be combined; doing so produces double-counting of the recurring-revenue contribution. Section 5.1 returns to the practical implications of the methodology choice.

The density benchmark observable in the operational data services is that a baseline operator carries approximately 250 to 500 active maintenance agreements per one million dollars of revenue, with operators having dedicated maintenance-fleet infrastructure achieving 1,000 to 1,500 agreements per one million dollars of revenue (ServiceTitan, 2024).

The density gap between baseline and dedicated-fleet operators is a principal observable lever for owner-operators seeking to expand the recurring-revenue share of the business in advance of a sale process.

4.3 Buyer-Archetype Pricing Differentiation

Table 2 presents the buyer-archetype pricing differentiation observed across practitioner reporting.

Table 2. HVAC buyer-archetype pricing and deal-structure ranges (synthesis of practitioner reporting).

Buyer Archetype	Typical Target	Multiple Range	Cash at Close	Rollover / Earnout / Note
Individual operator (SBA)	\$200K – \$1.5M SDE	2.0 – 3.5x SDE	60–80%	20–40% seller note
Search funder	\$500K – \$2.5M EBITDA	3.5 – 5.5x EBITDA	50–65%	15–25% rollover, 15–25% seller note
Family office	\$1M – \$10M EBITDA	4.5 – 6.5x EBITDA	varies	flexible; longer hold horizons
PE add-on	\$1M – \$10M EBITDA	4.0 – 8.0x EBITDA	70–85%	10–20% rollover, 5–15% earnout
PE new-platform	\$3M – \$15M EBITDA	7.0 – 12.0x EBITDA	65–80%	15–25% rollover with founder continuation
Strategic / publicly-traded acquirer	\$3M+ EBITDA	7.0 – 11.0x EBITDA	80–95%	minimal rollover; possible modest earnout

Note. Multiple and deal-structure ranges are synthesised from Auxo Capital Advisors (2026), Breakwater M&A (2026), Main Street Wealth (2026), and cross-referenced against the LMM buyer-demand evidence in Totter (2026a). The PE new-platform multiple range overlaps with the Tier 3 to Tier 4 multiple range in Table 1, reflecting the substantial role of PE new-platform sponsors in the three to fifteen million dollar EBITDA segment.

Two patterns emerge. First, the buyer-archetype differentiation operates **within the size-tier band** rather than across size tiers: a three-million-dollar-EBITDA HVAC business will receive offers from search funders, family offices, PE add-on sponsors, PE new-platform sponsors, and strategic acquirers, each at materially different multiple levels and deal-structure mixes. The seller’s achievable price is therefore driven by the targeted buyer-archetype within a competitive process, not only by the underlying size-tier classification.

Second, the **cash-at-close fraction varies systematically across archetypes**. Strategic acquirers and PE add-on sponsors offer the highest cash-at-close fractions (80 to 95 percent and 70 to 85 percent respectively), while search funders and individual operators offer materially lower cash fractions (50 to 65 percent and 60 to 80 percent) compensated by higher rollover, seller-note, or earnout components. The seller's preference between higher headline multiple with lower cash certainty and lower headline multiple with higher cash certainty is the principal practical trade-off across archetypes and is developed in Section 5.1.

4.4 Observable Value-Driver Characteristics

Within each size-tier band, observable business-level characteristics produce material multiple expansion or compression. Practitioner reporting converges on the following principal value-driver characteristics:

- **Recurring revenue intensity** (Section 4.2): +0.5 to +1.0 times EBITDA for businesses with 30 percent or more revenue from maintenance-agreement membership programmes.
- **Commercial-versus-residential mix**: Commercial mechanical operations with established multi-year service contracts command premium tiers; residential operations with strong recurring-revenue economics are second in the practitioner-cited ranking, with residential installation-and-replacement-dependent operations at the lower end of the range.
- **Geographic concentration**: Sun Belt operators (Texas, Florida, Arizona, Georgia, the Carolinas) are practitioner-cited as commanding a premium reflecting demographic in-migration and replacement-cycle demand fundamentals, although the magnitude of the geographic premium is not separately quantified in the practitioner sources.
- **Management depth and owner-dependency**: Owner-dependency is identified by Profitability Partners (2024) as “the single most common factor” producing multiple compression in HVAC transactions; the typical magnitude is identified as -0.5 to -1.0 times EBITDA. Conversely, demonstrable management depth (general manager, dispatch supervision, service operations leadership distinct from the owner) supports the upper end of the size-tier multiple range.
- **License-holder structure**: Individual-held master mechanical or HVAC licenses (versus entity-level licensing) produce material multiple compression because the license is not directly transferable on ownership change. Practitioner reporting identifies this as a deal-killer for institutional buyers without remediation.
- **Fleet age and capital reinvestment**: Average fleet age above six years is identified as a deferred-capex indicator and is associated with practitioner-cited multiple compression.

- **New-construction concentration:** New-construction revenue above 30 percent is associated with cyclical-risk multiple compression; approximately 50 percent is identified as the practitioner-cited ceiling for institutional-buyer interest.
- **Customer concentration:** Single-customer concentration above 15 percent of revenue is associated with multiple compression and a typical buyer requirement for material earnout sizing to share the concentration risk.
- **Field-service management (FSM) platform deployment:** Absence of an FSM platform (Service Titan, FieldEdge, Housecall Pro, or equivalent) is identified as -0.5 to -1.0 times EBITDA compression in PE transactions, reflecting the buyer's anticipated integration cost.
- **Workers' compensation experience modifier:** Workers' compensation modifier above 1.10 indicates above-average safety incidence and is associated with practitioner-cited multiple compression.

The cumulative effect of multiple value-driver characteristics within a single transaction can compress or expand the headline size-tier multiple by 1.5 to 3 times EBITDA from the tier midpoint. A three-million-dollar EBITDA HVAC business with strong recurring revenue, demonstrable management depth, Sun Belt geographic concentration, low customer concentration, and an established FSM platform would plausibly transact toward or above the upper end of the Tier 3 range (9 to 10 times); the same business with owner-dependency, fifty percent new-construction concentration, and an individual-held license would plausibly transact toward the lower end of the Tier 2 range (5 to 6 times) or face buyer-pool contraction altogether.

4.5 Public-Comparable Anchor and the Private-Company Discount

The publicly-traded HVAC-and-mechanical-services consolidators (Comfort Systems USA, EMCOR Group, Watsco) provide an observable anchor for the upper boundary of the multiple distribution. Pinned to the late-May 2026 observation window and computed from FY2025 audited results, the trailing-twelve-month enterprise-value-to-EBITDA multiples were approximately 35.5 times for Comfort Systems USA (FY2025 adjusted EBITDA of 1.45 billion U.S. dollars at market capitalisation of approximately 60.5 billion dollars), approximately 18.4 times for EMCOR Group (FY2025 implied EBITDA of approximately 1.75 billion dollars at market capitalisation of approximately 41.2 billion dollars), and approximately 20.5 times for Watsco (trailing-twelve-month EBITDA of approximately 736 million dollars at market capitalisation of approximately 14.7 billion dollars). The three listed comparables differ from one another in operational character: Comfort Systems USA combines mechanical construction and service operations with material technology-sector and data-centre customer concentration (technology customers represented 45 percent of FY2025 revenue per the FY2025 10-K), EMCOR Group operates a diversified U.S.

construction-services portfolio with electrical, mechanical, and building-services segments, and Watsco operates an HVAC wholesale-distribution business model that is structurally distinct from the contractor-services operations of the LMM private comparables.

The differential between the public-comparable multiples and the Tier 5 private-platform multiples is in the direction predicted by the private-company acquisition discount documented by Officer (2007), but **the magnitude of the differential cannot be cleanly attributed to the Officer mechanism alone**. Four distinct effects are operating concurrently and cannot be separated using the data available in this synthesis. First, the **Officer (2007) liquidity discount** itself, documented as a 15 to 30 percent multiple discount for unlisted targets relative to size-matched publicly-traded targets. Second, a **size-class discount**: the listed comparables operate at multi-billion-dollar EBITDA levels (1.45 billion for FIX, 1.75 billion for EME, 0.74 billion for WSO), while the largest Tier 5 private HVAC platforms operate at the 100 to 200 million dollar EBITDA level (a Champions Group transaction at 2.5 billion dollars on approximately 140 million dollars of EBITDA implies the order of magnitude; Mergersight, 2026). The size-class differential between the listed and Tier 5 segments is therefore approximately one order of magnitude, large enough to support a material size discount independent of any liquidity effect. Third, a **business-mix and diversification differential**: the wholesale-distribution model of Watsco and the construction-services-portfolio model of EMCOR are not directly comparable to the residential-and-commercial-services operating models of the Tier 5 private HVAC platforms. Fourth, a **cycle-specific data-centre construction premium**: the FY2025 results disclosed by Comfort Systems USA include a 99 percent year-over-year backlog increase driven by data-centre and AI-infrastructure construction demand, which has been a 2024–2026 cycle-specific tailwind for listed mechanical-construction firms not equally available to residential-and-commercial-services platforms.

Each of these four effects plausibly contributes to the observed public-private multiple differential, and decomposing them requires controls that are not available within the scope of this synthesis. The conservative interpretation is therefore that the directional pattern (listed comparables trade above LMM private comparables) is consistent with the Officer (2007) framework but that the **magnitude** of the differential should not be attributed to the Officer mechanism without size-matched controls. A more defensible cross-reference would be limited to size-matched comparisons (private HVAC platforms in the 100 to 250 million dollar EBITDA range against listed peers in the same size class, which are not currently available in the U.S. HVAC vertical), or to controls for cycle-specific premia (excluding the data-centre construction tailwind from the listed-comparable EBITDA). Neither control is implemented here, and the multiple differential is reported as a directional pattern rather than as a quantitative test of the Officer (2007) coefficient.

The implication for sellers and capital allocators is that the qualitative finding (LMM private HVAC multiples sit below listed-comparable multiples) holds regardless of the attribution decomposition; what is not supported by the synthesis evidence alone is a precise

estimate of how much of the gap is liquidity-driven, size-driven, mix-driven, or cycle-driven. Sellers of LMM private HVAC businesses should plan around the directional ceiling that the listed comparables provide rather than around any specific implied multiple derived from cross-comparable arithmetic. Section 5.1 develops the practical seller-side implications.

5. Discussion

The synthesis has three sets of implications.

5.1 Implications for Owner-Operators

For owner-operators of U.S. HVAC service businesses considering a sale, the synthesis supports four practical inferences.

First, the **SDE-to-EBITDA threshold at approximately one million dollars in annual owner economic benefit** is a discontinuous valuation event. Owners operating in the upper half of Tier 1 (approximately 500 thousand to one million dollars in SDE) face a large economic return to investment in the management-depth, financial-reporting, and add-back-documentation discipline that produces credible institutional-buyer-pool transition to Tier 2. The doubling of realised value across the threshold (from approximately 2.5 times SDE to approximately 5 times EBITDA) exceeds the cost of the underlying investment for most realistic operator paths.

Second, the **recurring-revenue premium** is among the highest-impact observable value drivers available to owner-operators in advance of a sale. The transition from below 15 percent recurring revenue to above 30 percent recurring revenue is associated with practitioner-cited multiple expansion of 0.5 to 1.0 times EBITDA, which on a three-million-dollar EBITDA business is approximately 1.5 to 3.0 million dollars of headline-value impact. The density benchmark observable in the operational data services (250 to 500 baseline plans per one million dollars of revenue versus 1,000 to 1,500 plans for dedicated-maintenance-fleet operators) identifies a substantial structural lever that owner-operators can pursue over a 12 to 24 month pre-sale preparation horizon.

Third, the **buyer-archetype targeting decision** drives achievable price and deal structure. Owner-operators with strong management depth and recurring-revenue characteristics receive credible offers from multiple buyer archetypes simultaneously in a competitive process; the cash-versus-rollover-versus-earnout trade-off across archetypes is the principal practical decision dimension. Owner-operators preferring higher cash certainty would target strategic acquirers and PE add-on sponsors; owner-operators preferring participation in the post-close growth thesis would target PE new-platform sponsors with founder-continuation rollover structures.

Fourth, the **value-driver characteristics in Section 4.4** are individually addressable in pre-sale preparation. Owner-dependency reduction, individual-held-license transition to entity-level licensing, FSM platform deployment, new-construction concentration rebalancing toward maintenance-and-service revenue, and customer-concentration reduction are each multi-month operational projects that materially affect achievable multiples. The cumulative effect of multiple value-driver improvements within a 12 to 24 month pre-sale preparation window has been observed in practitioner reporting to lift realised multiples by 1.5 to 3.0 times EBITDA from the unprepared baseline.

5.2 Implications for Buyers

For PE platform sponsors, PE add-on capital, family offices, search funders, and strategic acquirers active in the U.S. HVAC vertical, the synthesis supports three implications.

First, the **size-tier gradient** provides a structural arbitrage opportunity within a single vertical, with the buy-and-build mechanics documented by Hammer et al. (2022) producing the multiple-arbitrage spread between platform (Tier 4 to Tier 5) and add-on (Tier 2 to Tier 3) acquisitions. The structural persistence of the gradient is supported by the SDE-to-EBITDA threshold (which mechanically separates the buyer pools at the lower end), the size-dependent institutional-buyer participation pattern, and the private-company discount that bounds Tier 5 multiples below the listed-consolidator range. The arbitrage spread is therefore not subject to rapid market-driven compression and supports continued platform-and-add-on PE deployment in the vertical.

Second, the **value-driver characteristics** identified in Section 4.4 supply observable diligence anchors for buyer-side underwriting. Recurring revenue intensity above 30 percent, demonstrable management depth, FSM platform deployment, and the absence of individual-held licensing are each characteristics that can be confirmed in pre-LOI screening at materially lower diligence cost than the post-LOI Quality of Earnings review. Buyer-side screening discipline that filters for these characteristics at the LOI stage reduces post-LOI deal-failure incidence in a vertical where diligence-driven deal failure has been the principal failure mode in recent practitioner reporting (Axial, 2025; see Totter, 2026c).

Third, the **public-comparable anchor** documented in Section 4.5 supports buyer-side framing of exit-multiple expectations. The observable gap between Tier 5 private-platform multiples and listed-consolidator multiples constrains the achievable multiple-expansion exit pathway for newly-formed private platforms; exit pathways to listed consolidators (Comfort Systems USA, EMCOR Group, or potential future listed HVAC consolidator IPOs) plausibly capture some portion of the gap, although decomposing how much of the gap reflects the Officer (2007) liquidity discount versus size, business-mix, and cycle-specific effects is not possible within the scope of this synthesis (Section 4.5).

5.3 Implications for the Academic Literature on Private-Company Pricing

For the academic literature on private-company acquisition pricing, the U.S. HVAC case study provides empirically rich material for testing several propositions advanced in the literature.

First, the **Officer (2007) private-company discount** is testable in the HVAC-specific setting through cross-tier comparison of LMM private-transaction multiples against size-matched public-comparable multiples. The synthesis evidence presented here supports the directional finding but not a quantitative estimate of the discount, because the available listed comparables differ from the Tier 5 private platforms by approximately one order of magnitude in EBITDA scale, by material business-mix composition (wholesale distribution versus services contracting), and by cycle-specific demand exposure (data-centre construction premium). A more defensible HVAC-specific Officer test would require a size-matched private-public comparable set that does not currently exist in the U.S. HVAC vertical, and is identified as a research priority in Section 6.

Second, the **buy-and-build multiple-arbitrage spread** documented by Hammer et al. (2022) and Heisig et al. (2022) is testable through reconstruction of the platform-acquisition multiples of the named HVAC platforms (Apex Service Partners, Sila Services, Wrench Group, Authority Brands, Redwood Services, Champions Group, Service Logic) against the add-on-acquisition multiples observable for the same platforms' add-on programmes. The press-derived references for the platform-level transactions provide an upper-bound estimate of the platform-side multiples; the lower-bound estimate of the add-on-side multiples is supplied by the size-tier gradient documented in Table 1. The implied multiple-arbitrage spread (Tier 4 to Tier 5 platform multiples minus Tier 2 to Tier 3 add-on multiples) is approximately 4 to 12 times EBITDA across the size-tier band, within range of the buy-and-build spread documented in Hammer et al. (2022) on the cross-industry sample.

Third, the **SDE-to-EBITDA threshold discontinuity** (Section 4.1) is the most theoretically distinctive of the empirical patterns documented in this paper and warrants more extensive development than the limited practitioner observation it currently rests on. The pattern of a near-doubling of realised multiple at the one-million-dollar-owner-economic-benefit threshold is well-documented in practitioner reporting (Auxo Capital Advisors, 2026; Main Street Wealth, 2026) but has not been formally modelled in the academic literature on private-company pricing. Three candidate theoretical mechanisms each plausibly contribute to the discontinuity, and disentangling their relative contributions is identified as a research priority.

The **search-and-matching mechanism** operates through the discontinuous change in the buyer pool. Below the threshold, the relevant buyer pool comprises SBA-financed individual-operator buyers and small-fund search funders whose underwriting models depend on the buyer-or-searcher serving as the operating CEO of the acquired business. Above the threshold, the relevant buyer pool expands to include PE add-on capital, family-

office direct investors, and institutional search funders whose underwriting models accommodate a separation of ownership and management. The transition is mechanically discontinuous because the lower-tier buyer pool cannot economically participate at higher EBITDA ranges (the personal-leverage and personal-management capacity constraints bind), while the upper-tier buyer pool will not participate at lower EBITDA ranges (the deal-screening and diligence cost structures of institutional acquirers cannot amortise over sub-million-dollar deals). The reservation prices of the two buyer pools accordingly differ by a structural margin, and the observed multiple discontinuity reflects the shift from the lower-pool reservation price to the upper-pool reservation price at the threshold. Formal modelling of this mechanism would draw on the assignment-and-matching literature in labour economics adapted to private-company acquisition markets, with the buyer-side cost structure and risk-tolerance distribution generating the pool-specific reservation prices.

The **institutional-mandate mechanism** operates through the minimum-EBITDA thresholds embedded in PE fund and family-office investment mandates. PE platform funds and family-office direct-investment programmes typically operate under written mandates specifying minimum platform-and-add-on EBITDA thresholds (one million, two million, or three million dollars are common minimums in published practitioner data; Totter, 2026a). Businesses below the mandate threshold are mechanically excluded from the institutional buyer pool regardless of their underlying business quality. The threshold is therefore not a smooth function of risk-adjusted return but a discrete eligibility criterion. Crossing the mandate threshold accordingly produces a discrete expansion of the eligible buyer pool, which is consistent with the observed discontinuous multiple expansion. Formal modelling would draw on the mandate-constrained portfolio choice literature applied to private-market investing.

The **SBA-financing-capacity mechanism** operates through the U.S. Small Business Administration's 7(a) loan programme, which is the principal financing vehicle for individual-operator acquisitions in the sub-one-million-dollar segment. SBA 7(a) loans cap at five million dollars principal per borrower, support up to 90 percent loan-to-value on qualifying acquisitions, and require personal guarantee and operating-CEO commitment from the borrower. The effective ceiling on SBA-financed acquisitions is therefore approximately five to six million dollars of enterprise value (the five million dollar loan plus borrower equity of approximately one million dollars). Businesses below this enterprise-value ceiling are competed for by SBA-financed individual buyers; businesses above the ceiling are not, because the SBA-financed buyer pool cannot economically reach them. The threshold accordingly maps to an enterprise-value ceiling at which the SBA-financed buyer pool drops out of the market, with the institutional buyer pool entering at materially different reservation prices. Formal modelling would draw on the credit-rationing and lender-cap literature in entrepreneurial finance.

A model-based account of the SDE-to-EBITDA threshold integrating all three mechanisms would supply a theoretical foundation for one of the most economically important valuation patterns observed in the U.S. small-business and lower-middle-market segment. The practical implication, developed in Section 5.1, is that owner-operators positioned in the upper half of the sub-one-million-dollar tier face an unusually high return to investment in the management-depth, financial-reporting, and operational-independence improvements that produce credible institutional-buyer-pool transition.

6. Limitations and Future Research

Six limitations bear restatement.

First, **this paper is a synthesis of publicly-available practitioner and academic sources**, not an original-data empirical study. The contribution is integrative synthesis and hypothesis generation.

Second, **audited deal-level multiple data is not publicly available** at the LMM-private-transaction level. The size-tier multiple ranges in Table 1 are aggregated from practitioner reporting that itself draws on confidential transaction data. Triangulation against GF Data deal-participant rosters or PitchBook deal-level data (where access permits) would refine the size-tier and value-driver multiple distributions.

Third, **press-derived platform-multiple references** for the Tier 5 transactions (Sila Services, Champions Group, Redwood Services) are not independently confirmed. Direct sponsor disclosure of consideration values for these transactions, where it becomes available through subsequent filings or regulatory disclosure, would supply primary-source confirmation.

Fourth, **buyer-archetype pricing-range data is HVAC-applicable but not HVAC-specific**. The buyer-archetype differentiation in Table 2 reflects practitioner reporting that aggregates across the cross-industry LMM population. HVAC-specific buyer-archetype pricing tabulations would refine the table.

Fifth, **the recurring-revenue premium magnitude** is reported as practitioner-cited ranges rather than as empirically estimated coefficients. A regression-style analysis using deal-level data with controls for size, management depth, geographic concentration, and customer concentration would supply a more defensible estimate of the recurring-revenue premium and would test for non-linearities in the premium across the recurring-revenue-intensity range.

Sixth, **the analysis is U.S.-centric and concentrated on the contemporary 2024–2026 period**. Cross-period analysis (extending backward to the 2018–2020 pre-mid-cycle window and forward as data become available) would identify the cyclical

sensitivity of HVAC multiples and the persistence of the value-driver pricing effects across cycle conditions.

Future research priorities include: (i) GF Data and PitchBook deal-level multiple analysis with audited data, supporting empirical estimation of the size-tier gradient and value-driver coefficients; (ii) HVAC-specific buyer-archetype pricing tabulation through targeted survey of HVAC-active LMM buyers; (iii) regression-style analysis of the recurring-revenue premium with controls for confounding business-quality characteristics; (iv) cross-period analysis of HVAC multiples across the 2018–2026 PE consolidation cycle; and (v) cross-trade comparison of the size-tier gradient and value-driver pricing effects in adjacent service trades (plumbing, electrical contracting, residential services more broadly).

7. Conclusion

This paper has provided a structured synthesis of valuation-multiple evidence for U.S. HVAC service businesses in the lower middle market, drawing on publicly-disclosed transaction data, SEC filings of publicly-traded consolidators, practitioner valuation reports, and the academic literature on private-company acquisition pricing and buy-and-build value creation. Five empirical patterns are documented. First, valuation multiples exhibit a strong size-tier gradient from 2.0 to 3.0 times SDE for sub-one-million-dollar businesses through 13.0 to 20.0 times EBITDA for platform-scale transactions, with a discontinuous transition at the SDE-to-EBITDA threshold at approximately one million dollars in annual owner economic benefit. Second, recurring-revenue intensity above 30 percent is associated with an additional 0.5 to 1.0 times EBITDA premium across size tiers. Third, buyer-archetype differentiates achievable price and deal-structure mix, with strategic acquirers and PE add-on sponsors offering the highest cash-at-close fractions and PE new-platform sponsors offering the highest multiples with founder-continuation rollover. Fourth, observable value-driver characteristics (management depth, geographic concentration, license-holder structure, customer concentration, fleet age, FSM platform deployment) compress or expand multiples within the size-tier band by margins documented in practitioner reporting. Fifth, the directional pattern that Tier 5 private-platform multiples sit below the publicly-traded HVAC consolidator multiples is consistent with the private-company acquisition discount documented by Officer (2007), although the magnitude of the differential cannot be cleanly attributed to the Officer mechanism alone given the scale, business-mix, and cycle-specific differentials between the listed and Tier 5 segments.

The synthesis is situated within the academic literature on private-company acquisition pricing (Officer, 2007; Barger et al., 2008; Capron & Shen, 2007) and the buy-and-build value-creation framework (Hammer et al., 2022; Heisig et al., 2022). The principal contribution of the paper is to make a structured HVAC-vertical-specific valuation synthesis

available in a form that can be referenced in subsequent practitioner and academic work, with the public-comparable anchor and the size-tier gradient made explicit and the limitations of practitioner-aggregated source data acknowledged.

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Appendix A. Size-Tier Valuation Summary

Table A1 provides an extended summary of the size-tier valuation gradient with representative business profiles and buyer-pool composition for each tier.

Table A1. HVAC business size-tier valuation summary.

Tier	EBITDA / SDE Range	Multiple Range	Typical Buyer Pool	Representative Business Profile
1	< \$1M SDE	2.0–3.0x SDE	Individual operators (SBA), search funders, family-business buyers	Single owner-operator; 5–15 technicians; one location; residential or mixed; minimal recurring revenue
1	< \$1M EBITDA	3.0–4.5x EBITDA	Search funders, family offices (small), regional consolidators	Multi-technician operation with emerging management layer; 10–25 technicians; modest recurring revenue
2	\$1M–\$3M EBITDA	5.0–7.5x EBITDA	PE add-ons, search funders, family offices, strategic acquirers	Multi-tech operation with management layer; 20–50 technicians; recurring revenue typically 10–30%
3	\$3M–\$10M EBITDA	7.0–10.0x EBITDA	PE add-ons, PE new-platform sponsors, family offices, strategic	Multi-location regional operation; 50–150 technicians; recurring revenue typically 20–40%
4	\$10M–\$25M EBITDA	9.0–13.0x EBITDA	PE new-platform sponsors, strategic acquirers, family offices	Multi-location multi-state operation; 150–400 technicians; recurring revenue typically 25–45%
5	\$25M+ EBITDA	13.0–20.0x EBITDA (press-derived)	PE platform sponsors (large), consolidator-of-consolidator transactions, listed acquirers	National-scale platform; thousands of technicians; substantial multi-state operations; mature operating model

Note. Tier classification based on Table 1. Typical buyer pool and representative business profile based on practitioner reporting in Section 4 and pipeline observation across LMM HVAC engagements. The Tier 5 multiple range is press-derived and not independently confirmed.

Appendix B. Quality-of-Earnings Adjustment Categories Observed in HVAC Diligence

In a typical HVAC business diligence at the Tier 2 to Tier 4 level, ten categories of adjustment account for the substantial majority of net normalisation between reported EBITDA and quality-of-earnings-confirmed EBITDA. The categories, with typical magnitude ranges

observed in practitioner reporting and pipeline experience, are:

1. **Owner compensation true-down.** Adjustment of above-market owner salary to market-rate management-replacement compensation. Typical range: 100,000 to 500,000 U.S. dollars, depending on size tier.
2. **Family payroll add-back.** Reversal of below-fair-value compensation paid to family members not performing market-rate work. Typical range: 25,000 to 150,000 U.S. dollars.
3. **Personal expenses.** Reversal of personal expenses run through the business (auto, travel, entertainment, club memberships, personal insurance). Typical range: 20,000 to 100,000 U.S. dollars.
4. **Owner-leased real estate adjustment.** Adjustment to market-rate rent where the owner leases real estate to the business at non-market rates. Adjustment may run in either direction; typical magnitude: 30,000 to 150,000 U.S. dollars.
5. **One-time professional fees.** Reversal of one-time legal, accounting, or consulting fees not expected to recur. Typical range: 25,000 to 150,000 U.S. dollars.
6. **Deferred-capex normalisation.** Negative adjustment recognising that low recent capital expenditure has produced an artificially-elevated EBITDA that is not sustainable. Typical range: -50,000 to -300,000 U.S. dollars.
7. **Working capital normalisation.** Adjustment to representative-of-the-business working-capital levels. Typical magnitude: 5 to 12 percent of annual revenue, applied at the closing-balance-sheet level.
8. **Rebate timing adjustments.** Normalisation of OEM rebate income recognition timing. Typical range: 25,000 to 200,000 U.S. dollars.
9. **Discretionary bonuses.** Reversal of one-time or owner-directed bonuses not expected to recur. Typical range: 25,000 to 100,000 U.S. dollars.
10. **Non-recurring litigation or insurance claims.** Reversal of one-time legal settlements, insurance recoveries, or claim-related income or expense. Typical range: 25,000 to 250,000 U.S. dollars.

The cumulative effect of these adjustments on reported EBITDA in HVAC transactions is variable but ranges from a 10 to 25 percent upward normalisation (where reported EBITDA understates sustainable EBITDA due to non-recurring expenses or below-market owner compensation) to a 5 to 15 percent downward normalisation (where reported EBITDA overstates sustainable EBITDA due to deferred capex, aggressive add-back claims, or working-capital understatement). The proximate role of the quality-of-earnings review in the deal-failure dynamics documented in Totter (2026c) is to identify and adjudicate these adjustments before closing; the adjudication outcome largely determines whether the transaction closes on the original LOI terms, closes on retraded terms, or fails to close.